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September 2, 1986

TO: Mr. Jack Ellis, Head
Operations and Planning, IDOC

FROM: Dr. W. D. Klimstra, Director
Cooperative Wildlife Research Laboratory

RE: Bibliography on Toxicology:
Interim Report

Enclosed are 2 copies of the Interim Report due 1 September 1986 for the contract period June 1 - September 1, 1986, to provide "a bibliography of published data on field studies of acute toxicity, sublethal effects and secondary toxicity on wildlife species."

Further materials will be provided and the literature compiled into a review narrative during the second contract period, July 1, 1986 to June 1, 1987.

We are pleased to provide this Interim Report and welcome any questions or discussion. As per the contract terms, submission of this report constitutes a billing to the Division of Wildlife Resources, Illinois Department of Conservation for $2,400. Payment should be made to: Cooperative Wildlife Research Laboratory, Account No. 6-21654; send to the attention of W. D. Klimstra, Director, Cooperative Wildlife Research Laboratory, Southern Illinois University, Carbondale, IL 62901.

WDK:ah

Enclosures

cc: Dr. Alan Woolf

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INTERIM REPORT - A BIBLIOGRAPHY OF PUBLISHED DATA ON STUDIES OF ACUTE TOXICITY, SUBLETHAL EFFECTS AND SECONDARY TOXICITY ON WILDLIFE SPECIES

Prepared by

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This interim report represents 186 publications found in a preliminary search to evaluate published materials that can provide a basis for insecticide/pesticide risk assessment applicable to Illinois. Emphasis has been placed on literature pertaining to organophosphate compounds and their metabolites that may have direct effects on non-target wildlife and/or secondary effects on prey/scavenger species, especially raptors.

METHODS

A literature search was conducted both manually and with computer on-line data bases available at the Southern Illinois University at Carbondale (SIUC) library. In addition, toxicology experts at US Fish and Wildlife Service laboratories, the Environmental Protection Agency, and the Department of State, U.S.Aid, Office of Agriculture were consulted to determine availablity of unpublished data, antedotal accounts, and bibliographic materials.

Indexing services used included Biological Abstracts, Zoological Records, Wildlife Review, Pesticide Abstracts, and Chemical Abstracts. Literature cited sections in each

article located were scrutinized for additional citations. This process was continued until new references were no longer found.

Medline and Toxline computer data bases were searched 4 times using slightly different subjects for search. First, keywords relating to toxicology in general were used (toxicology, poisoning, insecticides, organophosphates, organochlorine, cholinesterase inhibition or inhibitors). Subsequent searches were made omitting heavy metals, DDT and DDE, but adding bird diseases, chemically induced, organophosphorus compounds, and textwords that might appear in article titles such as secondary, raptors, hawks, eagles, ospreys, owls, falcons, kestrels and birds. The most specific search on each data base focused on finding references pertaining to secondary fenthion poisonings in birds, particularly raptors.

The following references represent an alphabetical listing of those dealing with both the general aspects of wildlife toxicology and references found to date specifically dealing with known instances of secondary toxicity and effects on non-target species. The next phase of the project will include sorting by subject and annotation of key references that will provide a basis for risk assessment.

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